## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

## **LISTING OF CLAIMS:**

- (Original) A genetic vaccine construct comprising an avipox virus vector which
  incorporates and, on administration to a subject, expresses in a cell of said subject, a
  sequence of nucleotides encoding a xenogeneic prostate specific polypeptide or a
  derivative or analogue thereof, wherein said virus vector does not productively infect
  said subject.
- 2. (Original) A genetic vaccine construct comprising an avipox virus vector which incorporates and, on administration to a subject, expresses in a cell of said subject, a sequence of nucleotides encoding a xenogeneic prostate specific polypeptide or a derivative or analogue thereof, and a sequence of nucleotides encoding an immunostimulatory polypeptide, wherein said avipox virus vector does not productively infect said subject.
- 3. (Original) The genetic vaccine construct of claim 1 or 2, wherein the prostate specific polypeptide is prostatic acid phosphatase or a derivative or analogue thereof.
- 4. (Currently amended) The genetic vaccine construct of any one of claims 1 to 3 claim
   3, wherein the subject is a human subject.
- 5. (Original) The genetic vaccine construct of Claim 4, wherein the xenogeneic prostate specific polypeptide is rodent prostatic acid phosphatase.
- 6. (Original) The genetic vaccine construct of claim 5, wherein the rodent prostatic acid phosphatase is rat prostatic acid phosphatase.

- 7. (Original) The genetic vaccine construct of claim 2, wherein the immunostimulatory polypeptide is a cytokine.
- 8. (Original) The genetic vaccine construct of claim 7, wherein the cytokine is one or more of IL-2, IL-12, TNFα, IFNγ, IL-6, IL-4, IL-7 or GM-CSF.
- 9. (Original) The genetic vaccine construct of claim 8, wherein the cytokine is one or more of IL-2, IFNγ or IL-12.
- 10. (Original) The genetic vaccine construct of claim 9, wherein the cytokine is IL-2.
- 11. (Currently amended) The genetic vaccine construct of any one of claims 1 to 10 claims 1 or 2, wherein the avipox virus vector is a fowlpox virus vector.
- 12. (Currently amended) A composition comprising the genetic vaccine construct according to any one of claims 1 to 11 claims 1 or 2.
- 13. (Currently amended) A composition consisting essentially of the genetic vaccine construct according to any one claims 1 to 11 claims 1 or 2.
- 14. (Currently amended) The composition of claim 12-or-13, wherein expression products of said genetic vaccine construct stimulate a prostate cell specific immune response.
- 15. (Original) The composition of claim 14, wherein prostate cell specific immune response is a PAP specific immune response.
- 16. (Currently amended) The composition of claim 14 or 15, wherein the expression products of the genetic vaccine construct stimulate autoimmune prostatitis.
- 17. (Currently amended) A recombinant vector for use in making the genetic vaccine construct according to any one of claims 1 to 11claims 1 or 2 comprising:

- avipox virus vector nucleic acid sequences comprising sites for homologous
   recombination with an avipox virus vector;
- ii) one or more promoters; and
- iii) a sequence of nucleotides encoding a xenogeneic prostate specific polypeptide.
- 18. (Currently amended) A recombinant vector for use in making the genetic vaccine construct according to any one of claims 2 to 11claim 2 comprising:
  - avipox virus vector nucleic acid sequences comprising sites for homologous recombination with an avipox virus vector;
  - ii) one or more promoters;
  - iii) a sequence of nucleotides encoding a xenogeneic prostate specific polypeptide; and
  - iv) a sequence of nucleotides encoding an immunostimulatory polypeptide.
- 19. (Currently amended) A eukaryotic cell infected with a genetic vaccine construct according to any one of claims 1 to 11 claims 1 or 2.
- 20. (Currently amended) An antibody capable of acting as a marker for the genetic vaccine construct which antibody recognizes epitopes uniquely formed in expression products of the genetic vaccine construct according to any one of claims 1 to 11claims 1 or 2.
- 21. (Currently amended) A nucleic acid probe comprising a complementary form of a contiguous sequence of nucleotides of all or part of the genetic vaccine construct according to any one of claims 1 to 11claims 1 or 2 which specifically recognizes said genetic vaccine construct under appropriate hybridization conditions.

- 22. (Original) A method for stimulating or otherwise enhancing a prostate cell specific immune response in a subject comprising administration to the subject of an effective amount of a composition comprising a genetic vaccine construct comprising an avipox virus vector which incorporates and, on administration to a subject, expresses in a cell of said subject, a sequence of nucleotides encoding a xenogeneic prostate specific polypeptide or a derivative or analogue thereof, for a time and under conditions sufficient for expression products of said genetic vaccine construct to stimulate or otherwise enhance a prostate cell specific immune response, and wherein said avipox virus does not productively infect said subject.
- 23. (Original) A method for stimulating or otherwise enhancing a prostate cell specific immune response in a subject comprising administration to said subject of an effective amount of a composition comprising a genetic vaccine construct comprising an avipox virus vector which incorporates and, on administration to a subject, expresses in a cell of said subject, a sequence of nucleotides encoding a xenogeneic prostate specific polypeptide or a derivative or analogue thereof and a sequence of nucleotides encoding an immunostimulatory polypeptide, for a time and under conditions sufficient for expression products of said genetic vaccine construct to stimulate or otherwise enhance a prostate cell specific immune response, and wherein said avipox virus vector does not productively infect said subject and a sequence of nucleotides encoding an immunostimulatory polypeptide.
- 24. (Original) A method for immunotherapy and/or immunoprophylaxis of prostate cancer comprising administration of an effective amount of a composition comprising a genetic vaccine construct comprising an avipox virus vector which incorporates

and, on administration to a subject, expresses in a cell of said subject, a sequence of nucleotides encoding a xenogeneic prostate specific polypeptide or a derivative or analogue thereof, wherein said vector does not productively infect said subject, and wherein expression products of said vector stimulate a prostate cell specific immune response effective in the treatment and/or prophylaxis of prostate cancer.

- 25. (Original) A method for immunotherapy and/or immunoprophylaxis of prostate cancer comprising administration of an effective amount of a composition comprising a genetic vaccine construct comprising an avipox virus vector which incorporates and, on administration to a subject, expresses in a cell of said subject, a sequence of nucleotides encoding a xenogeneic prostate specific polypeptide or a derivative or analogue thereof, and a sequence of nucleotides encoding an immunostimulatory polypeptide, wherein said vector does not productively infect said subject, and wherein expression products of said vector stimulate a prostate cell specific immune response effective in the treatment and/or prophylaxis of prostate cancer.
- 26. (Original) The method of any one of claims 22 to 25, wherein the prostate specific polypeptide is a prostatic acid phosphatase or a derivative or analogue thereof and the prostate cell specific immune response is a PAP specific response.
- 27. (Currently amended) A method of any one of claims 22 to 26 claim 26, wherein the subject is a human.
- 28. (Original) The method of claim 27, wherein the prostate specific polypeptide is rodent prostatic acid phosphatase.
- 29. (Original) The method of claim 28, wherein the rodent prostatic acid phosphatase is rat prostatic acid phosphatase.

- 30. (Original) The method of claim 23 or 25, wherein the immunostimulatory polypeptide is a cytokine.
- 31. (Original) The method of claim 29, wherein the cytokine is one or more of cytokines IL-2, IL-12, TNF $\alpha$ , IFN $\gamma$ , IL-6, IL-4, IL-7 or GM-CSF.
- 32. (Original) The method of claim 31, wherein the cytokine is one or more of cytokines IL-2, IFNγ and/or IL-12.
- 33. (Original) The method of claim 32, wherein the cytokine is IL-2.
- 34. (Currently amended) The method of any one of claims 22 to 3325, wherein the avipox virus vector is a fowlpox virus vector.
- 35-47. (Cancelled)